



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Administrative Services

D'ARCY DIXON PIGNANELLI
Executive Director

Division of Facilities Construction and Management

F. KEITH STEPAN
Director

ADDENDUM

Date: 6 February 2006

To: Contractors

From: Jim Russell, Project Manager, DFCM

Reference: Lehi Armory-Cooling Addition and Electrical Service Upgrade
DFCM Project No. 05122470

Subject: **Addendum No. 1**

Pages	Addendum	1 page
	Revised Project Schedule	1 page
	<u>Mechanical Addendum</u>	<u>12 page</u>
	Total	14 pages

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

- 1.1.1 A Fugitive Dust Plan sun will not be required on this project.
- 1.1.2 Architectural Addendum #1
- 1.1.3 Extend Deadline to submit Questions until 4:00 PM on Wednesday Feb. 8, 2006
- 1.1.4 Extend Deadline for Final Addendum until 4:00 PM on Friday Feb. 10, 2006
- 1.1.5 An Electrical Engineers Addendum will be Made Available ASAP.

End of Addendum



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

PROJECT SCHEDULE -REVISED
Stage II = Two-Stage Bidding Process

PROJECT NAME: COOLING ADDITION AND ELECTRICAL SERVICE UPGRADE - LEHI ARMORY UTAH NATIONAL GUARD – LEHI, UTAH				
DFCM PROJECT #: 05122470				
Event	Day	Date	Time	Place
Stage II Bidding Documents Available	Thursday	January 26, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT and DFCM web site *
Mandatory Pre-bid Site Meeting	Wednesday	February 1, 2006	10:00 AM	Lehi Natl Guard Armory 348 East Main Street Lehi, UT
Last Day to Submit Questions	Wednesday	February 8, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Final Addendum Issued	Friday	February 10, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT or DFCM web site*
Prime Contractors Turn in Bid and Bid Bond	Wednesday	February 15, 2006	3:00 PM	Conference Center Building Utah State Fairpark 155 West 1000 North Salt Lake City, UT **
Subcontractors List Due	Thursday	February 16, 2006	3:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Project Completion Date	Friday	June 30, 2006	4:00 PM	

* DFCM's web site address is <http://dfcm.utah.gov>

** Due to the limited parking on Capitol Hill and anticipated shortage of parking during the 2006 Legislative Session, all bids will be received, opened, and read at the Conference Center at the Utah State Fairpark. Refer to map on the DFCM web site for directions (http://dfcm.utah.gov/project_center/ads_solicitations.htm)

ADDENDUM

Project Name: Lehi National Guard Cooling addition

Addendum No.: 1

DFCM Project # 05122470

Date: 02-06-06

From: WHW Engineering Inc
1354 East 3300 South Suite 200
Salt Lake City, Utah 84106
Phone (801) 466-4021 Fax (801) 466-8536

To: All bidders

This Addendum forms and becomes a part of the Contract Documents and modifies the original Bidding Documents dated 12-30-05 as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of 1 page, 5 drawings and new specifications sections 15182, 15763 and 15855.

I - CHANGES TO PRIOR ADDENDA:

II - CHANGES TO BIDDING REQUIREMENTS:

III - CHANGES TO AGREEMENT & OTHER CONTRACT FORMS:

IV – CHANGES/CLARIFICATIONS TO CONDITIONS OF THE CONTRACT:

V - CHANGES/CLARIFICATIONS TO SPECIFICATIONS:

Item V-1. Specification sections 15733 and 15195 to be removed.

Item V-2. Specification sections 15182, 15763 and 15855 have been added. See attached.

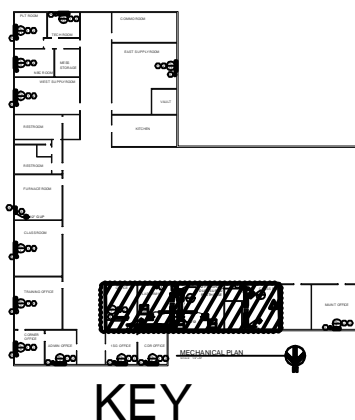
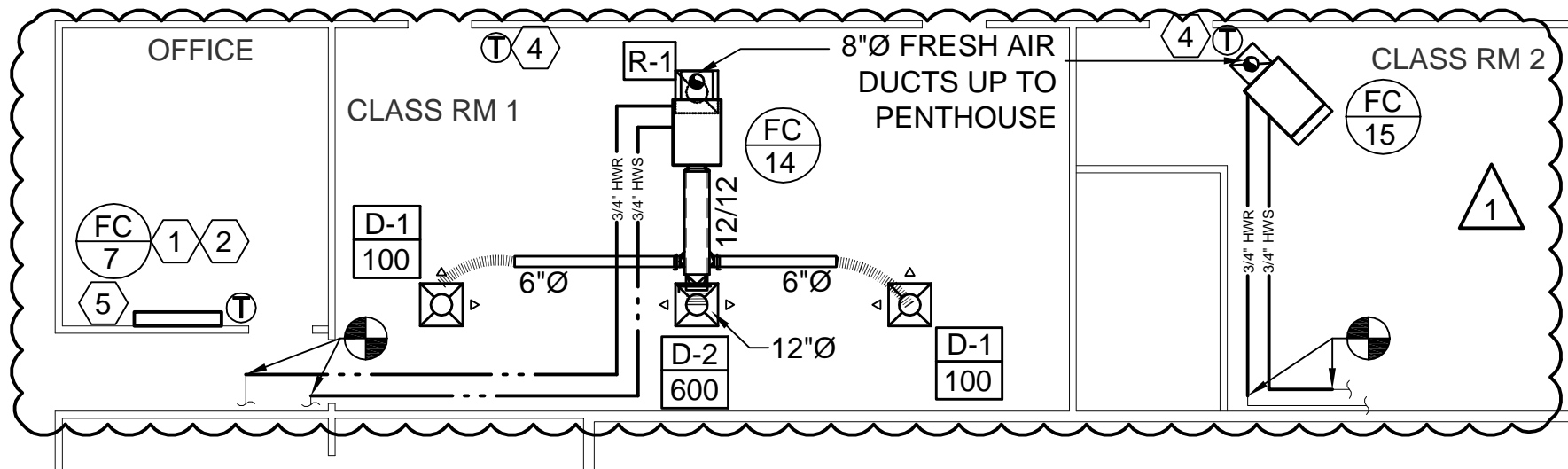
VI - CHANGES/CLARIFICATIONS TO DRAWINGS:

Item VI-1. Sheet ME101: The roof top unit and all associated gas piping and ductwork has been removed.

Item VI-2. Sheet MD101: Remove existing hydronic fan coil located in classroom 1 and 2, salvage to owner.

Item V-3. Sheet ME101, ME102, ME501, ME601: Two new hot water fan coils with cooling coils and condensing units have been added. Penthouses have been added to provide ducted outside air. The new fan coils will connect to existing hydronic piping but will be relocated in the room.

Item V-4. Sheet ME601: Fan coil 7 in the interior office has changed to a heat pump version which has changed condensing unit 7.



A1

MECHANICAL CLASSROOM PLAN

SCALE: 1/8" = 1'-0"



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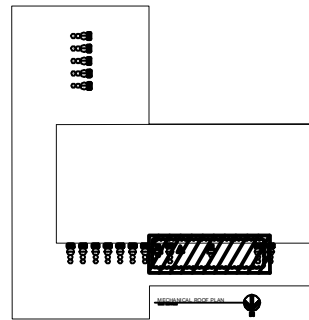
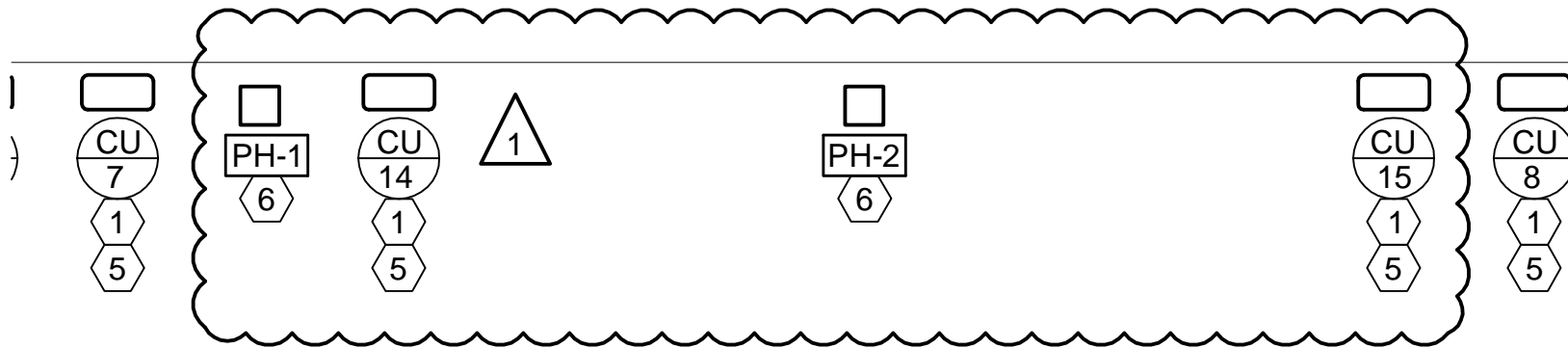


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LEHI NATIONAL GUARD COOLING ADDITION

DFCM# 05122470

ME-101



KEY

A2

MECHANICAL CLASSROOM PLAN

SCALE: 1/8" = 1'-0"



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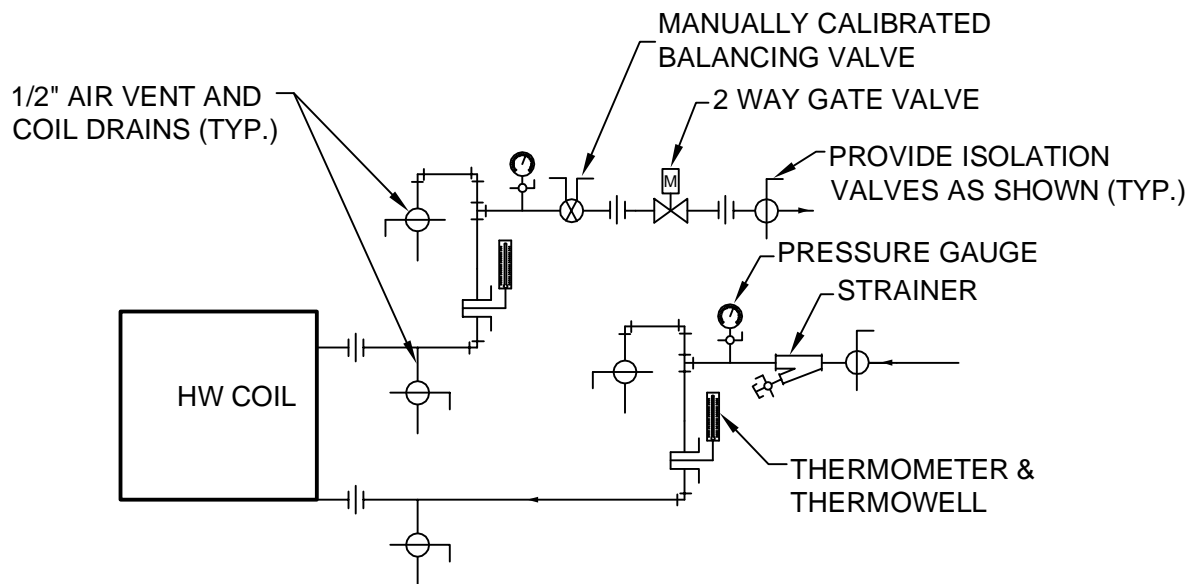
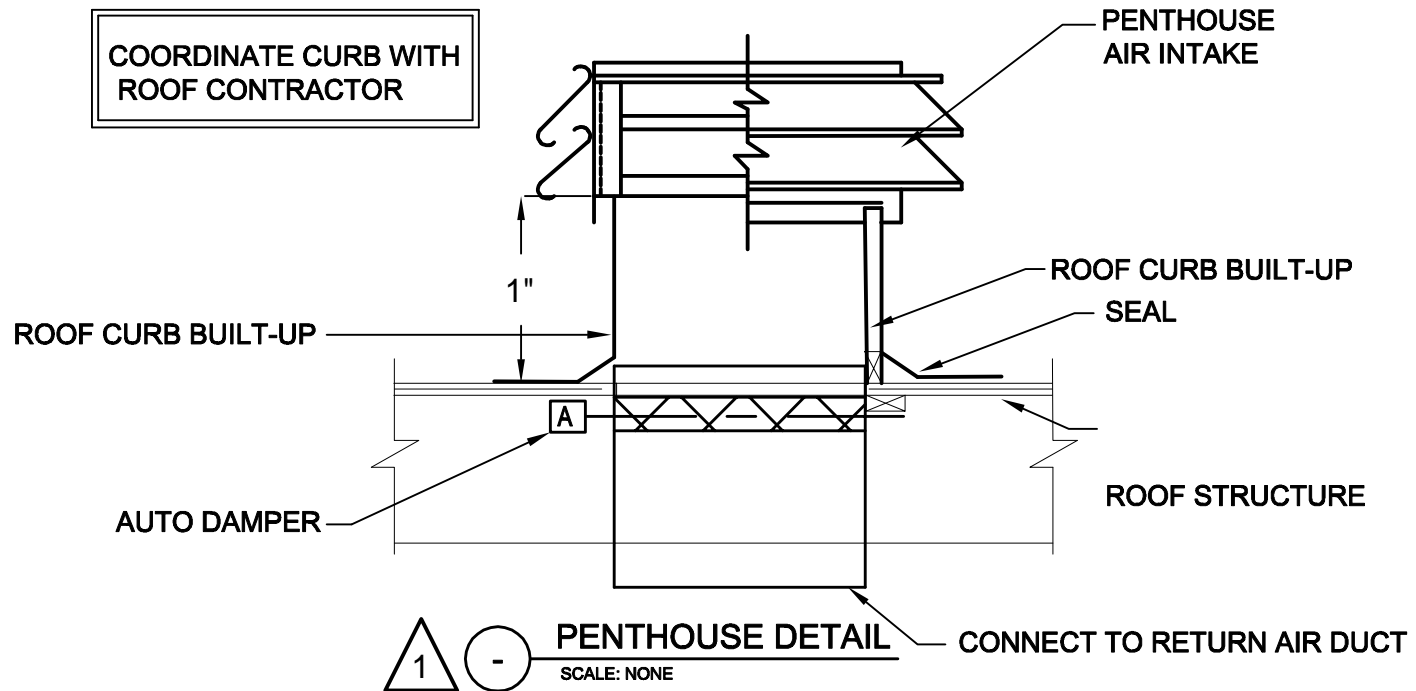


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**LEHI NATIONAL
GUARD COOLING
ADDITION**

DFCM# 05122470

ME-102



1 - FAN COIL PIPING DETAIL
SCALE: NONE

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LEHI NATIONAL GUARD COOLING ADDITION

DFCM# 05122470

ME-501

1

HOT WATER FAN COIL UNIT SCHEDULE

SYMBOL	ROOMS SERVED	FAN (2 SPEED)				COOLING COIL (4 ROW)				HEATING COIL (2ROW)			MANUF. & MODEL #	SCHEDULE NOTES
		SCFM COOLING / HEATING	O.A. CFM	ESP	H.P.	MIN. REQ'D CAP. TOTAL MBH	LEAVING AIR DB °F	COND. ENT. EVAP. DB° F	CND. ENT. EVAP. WB° F	MBH	MIN. GPM	EAT / LAT		
	CLASSROOM 1	800/ 600	200	.6	1/3	34	55	80	65	36	3.5	65/ 105	MAGICAIRE 24HBAX W/ 24HBH-2	1,2,3,5
	CLASSROOM 2	800/ 600	200	.6	1/3	34	55	80	65	36	3.5	65/ 105	MAGICAIRE 24HBAX W/ 24HBH-2	1,2,3,4,5

① SIZE FOR 180° EWT AND 20° ΔT.


② 115/1/60

③ PROVIDE UNIT WITH 2 TON DX COOLING.

④ PROVIDE WITH MANUFACTURES DISCHARGE AND RETURN AIR GRILLE

⑤ PROVIDE WITH MIXING BOX

SPLIT SYSTEM INDOOR UNIT SCHEDULE

SYMBOL	ROOMS SERVED	No. REQUIRED	CFM COOLING	MCA	MOCP	VOLTAGE-PHASE-HZ	FAN F.L.A.	MANUF. & MODEL #	SCHEDULE NOTES
	INTERIOR OFFICE	1	530	12	15	208/60/1	.5	EVAP. MITSUBISHI ELECTRIC PKH18FK	

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



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

LEHI NATIONAL GUARD COOLING ADDITION

DFCM# 05122470




ME-601

DIFFUSER SCHEDULE									
SYMBOL	TYPE	MAX CFM	FACE SIZE	NCK SIZE	BLOW	PATTERN	AIR DIST. A%	AIR DIST. B%	SCHEDULE NOTES
 D-1 CFM	CEILING	600	6/6	6"Ø	2-WAY		50	50	1,2,3
 D-2 CFM	CEILING	100	15/15	12"Ø	2-WAY		50	50	1,2,3

- ① PROVIDE LAY-IN CEILING AND BORDER / MODULE AS REQUIRED.
- ② MAXIMUM NC 25 AT CFM LISTED.
- ③ PRICE MODEL SMD

AIR COOLED CONDENSING UNIT SCHEDULE									
SYMBOL	AREA SERVED	MAX SIZE (BTU)	COMPRESSOR MOTOR			MCA	MOCP	MNUF. & MODEL #	SCHEDULE NOTES
			No.	RLA (EACH)	LRA (EACH)				
 CU-7	INTERIOR OFFICE	18,000	1	12	37	16	20	MITSUBISHI ELECTRIC PUH18EK	1,2,3,4
 CU-14	CLASSROOM 1	24,000	1	11.5	54	16	20	MITSUBISHI ELECTRIC PU24EK	1,2,3,4
 CU-15	CLASSROOM 2	24,000	1	11.5	54	16	20	MITSUBISHI ELECTRIC PU24EK	1,2,3,4

- ① REFRIGERANT R-22.

REGISTER, LOUVER & GRILLE SCHEDULE								
SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	COMMENTS	SCHEDULE NOTES
 R-1	CEILING	RETURN	850	20/20	20/20	LAY-IN		1,2,3
 PH-1	PENTHOUSE	OUTSIDE AIR	200	20/20	12/12	N/A		1,4
 PH-2	PENTHOUSE	OUTSIDE AIR	200	20/20	12/12	N/A		1,4

- ① MAXIMUM NC = 25 @ MAXIMUM CFM NOTED.
- ② SHALL BE PRICE 535 OR EQUAL BY OTHER APPROVED MANUFACTURERS. (SEE SPECIFICATIONS).
- ③ SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
- ④ RUSKIN MODEL PH811. PROVIDE BIRD SCREEN.

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**LEHI NATIONAL
GUARD COOLING
ADDITION**

DFCM# 05122470

ME-601

SECTION 15182 - HYDRONIC PIPING AND SPECIALTIES

PART 1 - GENERAL

1.1 SCOPE:

- A. Includes -
 - 1. Furnishing and installing the low temperature heating hot water system and specialties.
- B. Related Sections -
 - 1. Sections 15010, 15051, and 15101 apply to this section.

PART 2 - PRODUCTS

2.1 PIPE ALL SYSTEMS:

- A. Black steel schedule 40 pipe for supply and return.
 - 1. ASTM-A53
 - 2. ASTM-A106
- B. Fittings
 - 1. Low temperature heating hot water system fittings shall be
 - a. Steel 150 lb rated threaded or welded.
 - b. Flanges standard steel 150 lb.

2.2 VALVES

- A. Valves
 - 1. Provide on each valve a name plate showing manufacturer, valve size, grade, and pressure temperature service rating. Valve fluid bore shall match pipe size. All valves shall have renewable seats and discs, large deep stuffing boxes, packing glands and back seat on stem for repacking under pressure. Valves 1-1/2" and smaller shall be screwed or soldered connections. Valves 2" and larger shall be flanged.
- B. Ball Valves
 - 1. Designed for shut off service.
 - 2. Type 2, Class A rated at 150 lb steam working pressure and 350 deg F maximum temperature.
 - 3. Two piece bronze body construction with full port, vented ball, screwed end connections, blow-out proof stem, and teflon seats.
 - 4. Provide extended stem on insulated line.
 - 5. Approved Manufacturers -

- a. ConBraco - Apollo - 70-100 or equal by
- b. Hammond
- c. Milwaukee
- d. Nibco
- e. Watts
- f. Kitz

C. Balancing Valves

- 1. Combination balancing valve and flow metering device with provision for connecting differential meter. Each meter connection shall have positive shut-off valves.
- 2. Valve shall be of non-ferrous construction and globe style design or proportional flow ball valve.
- 3. Valve shall be capable of being installed either direction in the flow and not affect flow measurement.
- 4. Unit shall -
 - a. provide precise flow measurement.
 - b. have precision flow balancing.
 - c. have positive shut-off with no-drip seat.
- 5. Approved Manufacturer -
 - a. Bell and Gossett
 - b. Armstrong CBV
 - c. Flow-set
 - d. HCI

2.3 COCKS:

A. Gauge Cocks -

- 1. Brass Tee Handle
- 2. Approved Manufacturers -
 - a. Ashcroft - 1092
 - b. Ernst - 123
 - c. Trerace - 865
 - d. Walworth - 557

2.4 MANUAL AIR VENT BALL VALVE:

- A. Designed for use as a high point vent.
- B. Rated for 150 lb working pressure water, oil, gas, and steam.
- C. Bronze body with solder end connections, teflon stem & seats, and bubble tight shut-off. 3/8 inch size with tee handle.

D. Approved Manufacturers -

1. ConBraCo Appollo - 70-200.
2. Hammond - 806
3. Jenkins - 1100T
4. Milwaukee - BA150-TH
5. Nibco S580

2.5 COMBINATION BALL VALVE, HOSE CONNECTION, & CAP:

A. Approved Manufacturer -

1. ConBraCo - Apollo 78-100

PART 3 - EXECUTION

3.1 INSTALLATION

- A. See Section 15101 for general piping installation procedures.
- B. Install unions or flanges on downstream side of shut-off valves, specialty valves, and inlet and outlet to coils, pumps, and equipment.
- C. Install thermometers on inlet and outlet of coils, pumps, and where shown on the drawings.
- E. Install balancing valves as shown on the drawings.
- F. TESTING:
 1. Conduct tests in presence of Engineer and before piping is covered.
 2. Tests shall be as described in Section 15101 of the specifications.

END OF SECTION 15182

SECTION 15763 - FAN COIL UNITS

PART 1 - GENERAL

1.1 SUMMARY

1. Includes But Not Limited To
 - a. Furnish and install fan coil units as described in Contract Documents.
2. Related Sections
 - a. Section 15010 - General Mechanical Requirements
 - b. Section 15283 - Hot Water Piping and Specialties

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

1. Fan Coil Units
 - a. General -
 - 1) Provide access panels for servicing motor and fans.
 - 2) Factory installed filter box.
 - b. DX Cooling Coil
 - 1) Refrigerant line fittings which permit mechanical or sweat connections.
 - 2) Thermal expansion valve refrigerant control.
 - 3) Insulated steel condensate pan.
 - c. Heating Coil
 - 1) Factory furnished and installed in pre-heat position upstream of cooling coil
 - 2) Two row hot water type as required to meet scheduled capacity.
 - 3) Galvanized steel drip pan in unit.
 - d. Fan -
 - 1) Forward curved with double inlet, mounted on motor shaft, and dynamically and statically balanced.
 - 2) V-belt drives with single pitch sheaves.
 - e. Motors -
 - 1) Provide with voltage and speeds as scheduled.
 - 2) Designed for variable torque fan loads.
 - 3) Open drip-proof construction.

- 4) Voltage to match system voltage.
- 5) Mounting shall be factory furnished and installed.
- 6) Approved Manufacturers -
 - a) Leeson
 - b) General Electric
 - c) Century / Magnetec
 - d) Baldor

f. Approved Manufacturers -

- 1) MagicAire HBX w/ 2WH2 or equal by
- 2) Williams
- 3) Air Therm
- 4) Trane

2.2 ACCESSORIES

1. Vibration Isolators

a. Approved Manufacturers -

- 1) Kinetics RH
- 2) Mason HD
- 3) Vibration Mounting RH

2. Supports

a. Acceptable Manufacturers -

- 1) Unistrut P-1000 channel and Unistrut swivel hanger M2137
- 2) Equal as approved by Architect before installation.

PART 3 - EXECUTION

3.1 INSTALLATION

1. Support unit from structure above using specified supports.

END OF SECTION 15763

SECTION 15855 - PENTHOUSE VENTILATORS

PART 1 - GENERAL

1.1 SUMMARY:

- A. Includes But Not Limited To
 - 1. Furnish and install the roof mounted penthouses as scheduled in Contract Documents.
- B. Related Sections
 - 1. Section 15010 - General Requirements

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS:

- A. Penthouse
 - 1. Penthouse type of extruded aluminum complete with roof curb and 1/2 inch mesh 16 gauge aluminum bird screen.
 - 2. Finish shall be baked enamel with color by owner.
 - 3. Approved Manufacturers -
 - a. Tiered Type - Model TRE extruded aluminum ventilator by Loren Cook Company,
 - b. Louvered Penthouse -
 - 1) Model RLX by Breidert Co
 - 2) Model GLAB by Carnes Company
 - 3) Model WRH by Greenheck Fan Corporation
 - 4) Model MPH by Jenn-Air Industries Inc

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. Install in accordance with Manufacturer's recommendations.

END OF SECTION 15855